

sprocket wheels. As a result, the sails receiving the wind at the “front” or upwind of the apparatus are at a different elevation than when they take positions at the “rear” or downwind of the apparatus as shown schematically in Figures 3 and 5. In these figures, the rectangle 1A or 8 represents one sail receiving the full thrust of the wind as it travels at the “front” of the apparatus and rectangle 1B or 9 represents the same sail after having traveled around the sprocket wheels 6, 6A in Figure 3, (or sprocket wheels 16, 16A and 17, 17A in Figure 4 ) on its return journey at the “rear” of the apparatus. The direction of the wind 5 is shown by the arrows where it is clear that all the sails at position 9 receive the full thrust of the wind unobstructed by all the sails in position 8.

This unique way of altering the elevation of the sails in the rear of the apparatus as compared to that in the front is accomplished by placing the axles of said sprocket wheels at an angle which may range from zero to over forty five degrees so as to provide a most efficient operation. For maximum utilization of the wind and for allowing sufficient space for the deflection of the sails responding to the thrust of the wind, these wheels preferably are set at forty five degrees for embodiments as may be represented schematically in Figures 2 and 3.

For large-size linear motion wind driven power generators based on the teachings of our invention, each set of sprocket wheels 6,6A and 7,7A in Figures 2 and 3, are replaced by smaller-size sprocket wheel sets (16,16A), (17,17A) and (18,18A), (19,19A) as shown schematically in Figure 4 and in Figure 5. Thus when the apparatus of our invention employing the arrangement as depicted schematically in Figure 4, is used for small or for large-scale

installations, the axles of said sprocket wheels may be inclined to values considerably higher than forty five degrees as shown in the schematic end-view in Figure 5.

In the horizontal version of the apparatus, as depicted in Figures 2 and 3, the upper chain 2A and associated sprocket wheels 6,7 are positioned at an elevation different from that of the lower chain 2B and its associated sprocket wheels 6A,7A such that the distance between them is greater than the vertical dimension of each of the sails used. Similar constraints would apply to the embodiment depicted in Figures 4 and 5.

Particularly for large-scale installations, other modifications may be employed. For example the section of the sprocket chains 2A and 2B between the end sprocket wheels 6,6A and 7,7A of Fig. 2 (or 16,16A / 17,17A and 18,18A / 19,19A of Fig.4), may be guided and supported by a series of small, idling sprocket wheels (not shown in these figures).

Details of the mechanism of support of said sails onto the two sprocket chains (also not shown on these figures) are not of significant consequence other than that they should allow each sail the ability to pivot from position 1A or 8 at the front to position 1B or 9 at the rear of the apparatus.